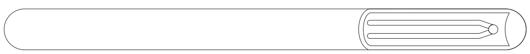
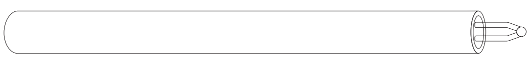
Table 5
Typical Junction Response Times
(63.2% of a (25 to 100) ºC Step Change)

SHEATH OD (inches)	'E' JUNCTION (seconds)	'G' JUNCTION (seconds)	'U' JUNCTION (seconds)
0.020	0.02 s	0.03 s	0.24 s
0.032	0.03 s	0.05 s	0.26 s
0.040	0.03 s	0.06 s	0.28 s
1/16	0.01 s	0.3 s	0.4 s
1/8	0.1 s	0.6 s	1.6 s
3/16	0.2 s	0.9 s	2.4 s
1/4	0.3 s	1.3 s	2.9 s
3/8	0.4 s	3.5 s	7.2 s

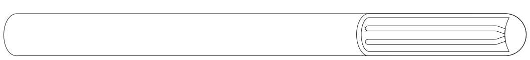
HOT or MEASURING JUNCTIONS



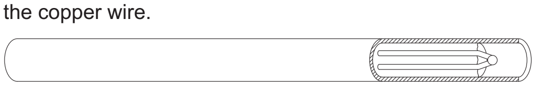
UNGROUNDED JUNCTION (U)
The welded thermocouple junction is fully isolated from the welded closure of the sheath. This junction provides electrical isolation to reduce problems associated with electrical interference. Ungrounded junctions are also recommended for use in extreme positive or negative temperatures, rapid thermal cycling and for ultimate corrosion resistance of the sheath alloy. All ungrounded junctions exceed 1000 MΩ resistance @ 500 V dc at ambient room temperatures.



EXPOSED JUNCTION (E)
The thermocouple wires are welded and exposed. The insulation is not sealed against liquid or gas penetration. Recommended where fast response is desired, and corrosive conditions are nonexistent. The exposed hot junction length for 1/8-inch diameter sheaths and above is typically 3/16" past sheath. The exposed junctions for sheath diameters less than 1/8-inch diameter are supplied as shielded junctions.



GROUNDED JUNCTION (G)
The thermocouple junction is welded securely into the closure end of the sheath, becoming an integral part of the weld. This is a good general purpose, low cost junction providing faster response times than an un-grounded junction of similar sheath diameter. Grounded junctions should not be used with Type T thermocouples, due to the copper wire.



SHIELDED JUNCTION (S)
The thermocouple wires are welded and recessed inside the sheath with the tip of the sheath open. Insulation is not sealed against liquid or a penetration.

Table 6
Sheath Mounting Fitting Dimensions

CODE	STYLE	SHEATH OD (inches)	NPT SIZE (inches)	LENGTH (inches)
01A	303 SS one-time adjustable	1/16, 1/8, 3/16, 1/4	1/8	1 5/16
05A	316 SS one-time adjustable	1/16, 1/8, 3/16, 1/4	1/8	1 1/4
05B	316 SS one-time adjustable	1/8, 3/16, 1/4, 3/8	1/4	1 7/8
05C	316 SS one-time adjustable	1/8, 1/4, 3/8	1/2	1 13/16
15A	Brass one-time adjustable	1/8, 3/16, 1/4	1/8	1 1/4
15B	Brass one-time adjustable	3/16, 1/4, 3/8	1/4	1 3/8
15C	Brass one-time adjustable	1/4, 3/8	1/2	1 1/2
10A	303 SS re-adjustable	1/16, 1/8, 3/16	1/8	1 1/4
10B	303 SS re-adjustable	1/4, 3/8	1/4	2 7/16
10C	303 SS re-adjustable	1/4, 3/8	1/2	2 7/16
12A	316 SS re-adjustable	1/16, 1/8, 3/16, 1/4	1/8	1 1/4
12B	316 SS re-adjustable	1/8, 3/16, 1/4, 3/8	1/4	1 1/2
12C	316 SS re-adjustable	1/8, 1/4, 3/8	1/2	1 3/4
11A	Brass re-adjustable	1/16, 1/8, 3/16, 1/4	1/8	1 19/64
11B	Brass re-adjustable	1/8, 3/16, 1/4, 3/8	1/4	1 9/16
11C	Brass re-adjustable	1/4, 3/8	1/2	1 13/16
19C	303 SS spring-loaded well ftg.	3/16, 1/4	1/2	2 1/4
8A	316 SS fixed bushing	All sizes	1/8	5/8
8B	316 SS fixed bushing	All sizes	1/4	11/16
8C	316 SS fixed bushing	All sizes	1/2	15/16
8D	316 SS fixed bushing	All sizes	3/4	1
6HN	Steel hex fitting	1/8, 3/16, 1/4, 3/8	1/2	2
8HN	316 SS hex fitting	1/8, 3/16, 1/4, 3/8	1/2	2
8RNDC	316 SS reducing hex fitting	1/8, 3/16, 1/4, 3/8	1/2 x 3/4	2
9HNB	303 SS hex fitting	1/8, 3/16, 1/4, 3/8	1/4	1 3/16
13A	Fixed bayonet fitting	1/8, 3/16	n/a	1 5/8
14	Adjustable flange	1/8, 3/16, 1/4, 3/8	n/a	1 1/2
16A	Adjustable bayonet fitting	1/8	n/a	1 5/8

Table 7
Leadwire Transition Fitting Dimensions

CODE	SHEATH DIAMETERS (inches)	FITTING OD (inches)	FITTING LENGTH	
			W/SPRING (inches)	W/O SPRING (inches)
15,16,19	0.020	3/8	2 (1/2)	1 (1/4)
15,16,19	0.032	3/8	2 (1/2)	1 (1/4)
15,16,19	0.040	3/8	2 (1/2)	1 (1/4)
15,16,19	1/16	1/4	2 (1/2)	1 (1/4)
15,16,19	1/16[1]	3/8	2 (1/2)	1 (1/4)
15,16,19	1/8	1/4	2 (1/2)	1 (1/4)
15,16,19	1/8[1]	3/8	2 (1/2)	1 (1/4)
15,16,19	3/16	3/8	2 (1/2)	1 (1/4)
15,16,19	1/4	3/8	2 (1/2)	1 (1/4)
15,16,19	3/8	7/16	2 (1/4)	1 (1/2)

[1] Used with flexible armor tubing, duplex T/C's, and wire codes P3, P1, and F3

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